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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 10/696,517
Filing Date: October 29, 2003
Appellant(s): GADE ET AL.

Victor J. Wasylyna

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10/24/08 appealing from the Office action mailed.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5060919	Takano et al	10-1991

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

a). The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

b). Claims 24-30, 38-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Takano et al (5060919).

Regarding claim 24, Takano et al (abstract; fig. 1; col. 1, lines 58 to cols. 2, 3, 4) discloses a method of controlling a hydraulic mount (fig. 1, col. 1, line 57 to col. 2, line 34) between an object (i.e. engine) and a base (chassis of vehicle; col. 8, lines 8-22), the object having a bounce resonance frequency, comprising:

calibrating at least one tunable parameter (viscosity of fluid tuned to cope with rolling vibration, col. 8, lines 8-22) of a control system of the mount (damper, fig. 1) based on the bounce resonant frequency (col. 8, lines 8-22) of the object (i.e. engine);

generating a first acceleration signal indicative of an acceleration of the object (col. 8, lines 42-53);

generating a second acceleration signal indicative of an acceleration of the base (col. 8, lines 42-53);

determining a relative acceleration across the mount based on the first and second acceleration signals (col. 8, lines 45-65);

generating a control signal responsive to the relative acceleration based on the at least one tunable parameter (col. 7, lines 50 to col. 8, line 3, lines 45-53); and

controlling the flow of MR mount fluid in the mount responsive to the control signal to minimize (see col. 8, lines 22-33) the relative acceleration across the mount over a predetermined band of frequencies.

Regarding claim 25, Takano et al (abstract; fig. 1; col. 1, lines 58 to cols. 2, 3, 4) discloses the method of claim 24 wherein the predetermined band of frequencies occurs at and around the resonance bounce frequency of the object (col. 8).

Regarding claim 26, Takano et al (abstract; fig. 1; col. 1, lines 58 to cols. 2, 3, 4) discloses the method of claim 25 wherein calibrating at least one tunable parameter comprises tuning an objective function obtained by a sensitivity function (col. 8).

Regarding claim 27, Takano et al (abstract; fig. 1; col. 1, lines 58 to cols. 2, 3, 4) discloses the method of claim 326 wherein calibrating at least one tunable parameter comprises tuning a weighting function (col. 8).

Regarding claim 28, Takano et al (abstract; fig. 1; col. 1, lines 58 to cols. 2, 3, 4) discloses the method of claim 27 wherein the weighting function is limited to the resonance bounce frequency (col. 8).

Regarding claim 29, Takano et al (abstract; fig. 1; col. 1, lines 58 to cols. 2, 3, 4) discloses the method of claim 28 wherein calibrating at least one tunable parameter comprises tuning an associated scalable factor (col. 8).

Regarding claim 30, Takano et al (abstract; fig. 1; col. 1, lines 58 to cols. 2, 3, 4) discloses the method of claim 29 wherein the associated scalable factor is used to increase and decrease the magnitude of the weighting function (col. 8).

Regarding claim 38, Takano et al (abstract; fig. 1; col. 1, lines 58 to cols. 2, 3, 4) discloses a system for controlling a hydraulic mount (fig. 1, col. 1, line 57 to col. 2, line 34) between an object (i.e. engine) and a base (vehicle chassis), the object having a bounce resonance frequency, the system comprising:

Means for modifying at least one tunable parameter (viscosity of fluid tuned to cope with vibration, col. 8, lines 8-22) of a control system of the mount (cols. 8, 9) based on the bounce resonant frequency (cols 8, 9) of the object (i.e. engine);

Means for generating a first acceleration signal indicative of an acceleration of the object (col. 8, lines 42-53);

Means for generating a second acceleration signal indicative of an acceleration of the base (col. 8, lines 42-53);

Means for determining a relative acceleration across the mount based on the first and second acceleration signals (col. 8, lines 45-65);

Means for generating a control signal responsive to the relative acceleration based on the at least one tunable parameter (col. 7, lines 50 to col. 8, line 3, lines 45-53); and

Means for controlling the flow of MR mount fluid in the mount responsive to the control signal to minimize (see col. 8, lines 22-33) the relative acceleration across the mount over a predetermined band of frequencies.

Regarding claim 39, Takano et al (abstract; fig. 1; col. 1, lines 58 to cols. 2, 3, 4) discloses the method of claim 38 wherein the predetermined band of frequencies occurs at and around the resonance bounce frequency of the object (i.e. engine col. 8).

Regarding claim 40, Takano et al (abstract; fig. 1; col. 1, lines 58 to cols. 2, 3, 4) discloses the method of claim 39 wherein the means for tuning at least one tunable parameter comprises an objective function obtained by a sensitivity function (see sensor s 90, 92, fig. 1).

Regarding claim 41, Takano et al (abstract; fig. 1; col. 1, lines 58 to cols. 2, 3, 4) discloses the method of claim 40 wherein the means for tuning at least one tunable parameter comprises a weighting function (cols. 3, 8, 9) .

Regarding claim 42, Takano et al (abstract; fig. 1; col. 1, lines 58 to cols. 2, 3, 4) discloses the method of claim 41 wherein the weighting function is based on the resonance bounce frequency (col. 8).

Regarding claim 43, Takano et al (abstract; fig. 1; col. 1, lines 58 to cols. 2, 3, 4) discloses the method of claim 42 wherein the means for tuning at least one tunable parameter comprises an associated scalable factor (col. 8).

Regarding claim 44, Takano et al (abstract; fig. 1; col. 1, lines 58 to cols. 2, 3, 4) discloses the method of claim 43 wherein the associated scalable factor is used to increase and decrease the magnitude of the weighting function (cols. 3, 8, 9).

Regarding claim 45, Takano et al (abstract; fig. 1; col. 1, lines 58 to cols. 2, 3, 4) discloses a system for a hydraulic mount positioned between a vibrating object (i.e. engine) and a base (vehicle chassis), said vibrating object having a bounce resonance frequency, the system comprising:

Means for generating a first acceleration signal (col.1, lines 39-54; col. 3, lines 33 to col. 4) indicative of an acceleration of said object;

Means for generating a second acceleration signal (col.1, lines 39-54; col. 3, lines 33 to col. 4) indicative of an acceleration of said base;

Means for determining 86 (col. 3, line 25) a relative acceleration (vibration, col. 3, lines 33-42) across the mount (col. 2, lines 7-16) based on the first and second acceleration signals;

Means for generating a control signal (88, cool. 3, lines 31&32) corresponding to the relative acceleration (vibration, col. 3, lines 33-42; col. 3, line38-42); and

Means for controlling the flow of MR mount fluid in the mount responsive to the control signal (col. 8);

means for tuning the control system to minimize the relative acceleration across the mount occurs at and around the bounce resonance bounce frequency (cols. 8, 9) of the object.

Regarding claim 46, Takano et al (abstract; fig. 1; col. 1, lines 58 to cols. 2, 3, 4) discloses the method of claim 24 wherein the calibrating step is performed electronically (viscosity of fluid tuned to cope with rolling vibration, col. 8, lines 8-22).

(10) Response to Argument

Appellant's arguments filed 10/24/08 have been fully considered but they are all not persuasive.

Appellant's argument that the prior art redesigns the system is not convincing because the prior art does not take the system from the vehicle back to the laboratory or repair shop for a redesign process. Contrary to appellant's remarks, redesigning is not taught in Takano. Appellant further does not explain or provide the metes and bounds of "redesigns the system". It

appears that appellant is reading limitations from the specification into the claims. Appellant's arguments appear to be directed to the specification NOT the claims because the phrase, "without the need to redesign physically or control aspects of the system" is not in the claims as argued by the applicant.

Similar to appellant's invention, Takano discloses that the viscosity of the electrorheological fluid is tuned (i.e. calibrated) electrically to cope with bounce effects or vibration of an engine. That is appellant's passes a current in an electrorheological fluid (MR fluid) wherein the viscosity (i.e. parameter) of the fluid is altered i.e. it is tuned to cope with bouncing or vibration of the engine. In a similar manner, Takano et al also passes a current in an electrorheological fluid (MR fluid) wherein the viscosity (i.e. parameter) of the fluid is altered i.e. it is tuned to cope with bouncing or vibration of the engine. As further noted, Takano's structure is similar to appellant's claimed structure both in function and scope. It is thus believed that Takano anticipates the claims

Appellant's further argument that the prior art does not disclose calibrating a tunable parameter is not convincing. The parameter is the viscosity of the MR fluid, NOT the mount. It is not clear what appellant means by "calibrating the mount". In Takano, similar to appellant's invention, the viscosity of the fluid is altered (or tuned) so as to cope with a vibration frequency of an engine, thus causing a dampening effect when the engine vibrates. Thus viscosity of the fluid refers to the claimed parameter. Viscosity is not the mount as insisted by the appellant. Thus the prior art (figs. 3-5; col. 8) anticipate the limitations.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Ronnie Mancho

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